REMARKS

Applicants thank Examiner Lewis for the review of the pending claims. Claims 1-8 are pending. Claims 1-3 and 5-6 are currently amended. By this amendment, no new matter is added. In view of the above amendment, Applicants believe the pending application is in condition for allowance.

35 U.S.C. § 112 Rejections

The Examiner rejected claims 1-8 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. Particularly, with regards to claims 1 and 6, the Examiner states that the terms "functional unit," "a reporter unit," and "biofunctional molecule" are not defined by the specification. Additionally, the Examiner argues that it is unclear whether the limitations within the parentheses are part of the claimed invention. Applicants respectfully traverse these rejections.

Applicants draw the Examiner's attention to paragraph [0040] of the published application, where all three terms, "functional unit," "a reporter unit," and "biofunctional molecule," are clearly defined, including by way of an example. Applicants request withdrawal of the rejection.

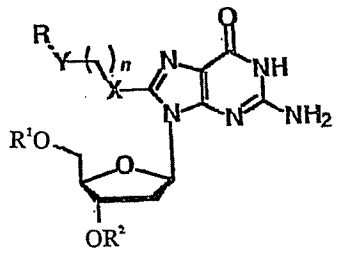
Additionally, Applicants amend claims 1 and 6 to remove the parentheses and request withdrawal of the rejection.

35 U.S.C. § 103 Rejections

The Examiner rejected claims 1-5 as allegedly being unpatentable over U.S. Patent No. 4,910,300 to Urdea ("Urdea") in combination with U.S. Patent No. 4,797,480 to Sorbi ("Sorbi"). Applicants respectfully traverse this rejection.

Claim 1, as amended, recites

> "*[a] nucleoside, a nucleotide or an oligonucleotide containing a moiety represented by the following formula (I)*



(I)

> *wherein X and Y independently represent –O–, –NH–, –N(alkyl)– or –S–; R represents a functional unit, a reporter unit or a biofunctional molecule; R^1 and R^2 independently represent a hydrogen atom, a phosphate bonding group, a phosphoramidite group or a nucleotide; and n is a number of 1 to 10.*"

This particular claimed purine was discovered to be useful in gene analysis, therapy and diagnosis of various diseases upon the release of the R group by oxidation, such as photoirradiation. (Specification, [0011-0012], [0015-0016]).

Urdea and Sorbi do not render the claim obvious for at least the reason that they do not teach a compound of formula (I) "*wherein X and Y independently represent –O–, –NH–, –N(alkyl)– or –S–; R represents a functional unit, a reporter unit or a biofunctional molecule.*" Specifically, Urdea discloses only the most basic purine structure for the purpose of merely illustrating general numbering rules of atoms in ring structures. (Col. 4, lines 19-48). It does not teach the specifically substituted purine of the claim. Nor does Sorbi.

The Examiner appears to be arguing that it would be obvious to try to make a substitution at the 8-position of the generic purine of Urdea to arrive at the presently claimed compounds. This rationale fails under the law of KSR. (*KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1397 (2007)). This is because an obvious-to-try rationale can only support a rejection under § 103 in the limited situations where there "are a finite number of identified, predictable solutions, [and] a person of ordinary skill has good reason to pursue the known options within his or her technical grasp." *Id.*

In this particular art, solutions are neither finite, identified nor predictable. Indeed, Urdea, the very reference the Examiner cited against the Applicants, proves this point. Urdea states that "nucleotide modification is a difficult and sensitive procedure, as any modification reaction has to be mild enough to leave the RNA or DNA molecules intact, while giving a modified nucleotide product which can participate in normal base pairing and stacking interactions." (Col. 2, lines 16-21). Thus, one of skill in this art would have no reason to expect that the particularly claimed substituted purine would have the activity that was discovered by the Applicants. So, it would not have been obvious to try such a substitution. Accordingly, claim 1 is not obvious over the cited references, individually or in combination. Claims 2-8 depend from claim 1, so they cannot be rendered obvious over the cited references for at least the reasons mentioned above. Thus, withdrawal of this rejection is respectfully requested.

Claims 6-8

The Examiner further rejected claims 6-8 as allegedly being unpatentable over Urdea in combination with Sorbi and further in view of Okamoto et al. Angew. Chem. Int. Ed. (2003), Vol.42, pgs. 2502-2504 ("Okamoto"). Applicants respectfully traverse this rejection.

Claims 6-8 are not obvious for the reasons stated above, and the Okamoto reference does not cure the deficiencies of Urdea and Sorbi. Claims 6-8 are not obvious for at least another reason.

The reason is that Urdea and Sorbi teach that it is not necessary to dissociate or release a group from a nucleotide to achieve a stable label. The labels of Urdea and Sorbi are expected to bind stably without dissociating or releasing. Therefore, one of skill in the art would be taught away from a method of releasing an R group by oxidation and would not turn to a reference such as Okamoto, which teaches the quenching of the closed-form of ODN.

CONCLUSION

Applicants believe any fee due has been addressed in an accompanying transmittal. Please charge Deposit Account No. 18-0013 under Order No. SAE-0037 from which the undersigned is authorized to draw. To the extent necessary, a petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged to such deposit account number.

Dated: July 3, 2008

Respectfully submitted,

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Attachments